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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Response to Arguments

On Page 11-15 applicant argues that Nafeh in view of Nagae et al fails to teach,

disclose, or fairly suggest the limitation of "characteristic extracting means for extracting

characteristic data indicting the probability of the first signal pad from the candidate part

detected by the candidate-detecting means or from signal pads preceding and following

the candidate pad" as disclosed in independent claims 1 and 30. Nafeh discloses a

system for classifying patterns of television programs and commercials based on

discerning of the audio video of the data stream as discussed in Column 2 Lines 38+

and seen in Figure 1a. It is shown that the system receives the input signal and is then

sent to the classifier for discerning pattern classification in which characteristic data is

extracted as further described in Column 2 Lines 63-67. Furthermore, a detailed

explanation of the extracted characteristic data and the probability that the commercial

is detected in the signal is discussed in Column 3 Lines 20-56 and thereby meeting the

limitation. Although, applicant's points are understood the examiner can not agree and

the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3,4,5,6,7,8,9,10,11,12,13,14,15,18,19,22,25,26,27,28,29,30,32,33,34,

35,36,37,38,39,40,41,42,43,44,47,48, and 51are rejected under 35 U.S.C. 103(a) as
being unpatentable by Nafeh (US 5,343,251) in view of Nagao et al (US 5,587,927).

[claims 1 & 30]

In regard to Claims 1 and 30, Nafeh discloses a signal-processing apparatus and method
comprising:

- Candidate-detecting means for receiving an input signal (Figure 1a line 12)
  including at least the first signal part and remaining signal parts in time-divided
  fashion for detecting, from the input signal (Column 2 Lines 55-62 and Column 5
  lines 41-42), a candidate part of the first signal part in accordance with
  characteristic patterns of the input signal at prescribed time intervals (Column 2
  Lines 64-68 describes the classification of the signals coming into the system at
  predetermined timing);

- Characteristic-extracting means for extracting characteristic data indicating the
  probability; (Column 6 Lines 6-12 describe the extracting of the data as well as
  the calculation of the probability of the output given the class of the input); and

- Detecting means for detecting the first signal part in accordance with the
  characteristic data extracted by the characteristic-extracting means (Column 6
  Lines 25+ describes a detected program to be 1 while the candidate
  part/commercial is −1);

- Wherein the detecting means includes characteristic-evaluating means for
  evaluating the possibility that the candidate part is the first signal part on the
  basis of the characteristic data, and determining means for determining the first
  signal part from the result of evaluation performed by characteristic-evaluating
  (Figure 1a classifier 24 classifies the first part of the signal on the basis of

classing of the characteristic data and thereby generates a control signal for

further evaluation as described in Column 2 Lines 63+ through Column 3 Lines

20-25);

- Wherein the characteristic-evaluating means evaluates the possibility that the

   candidate part is the fist signal part, on the basis of the characteristic data

   derived from multiplying weighting values to the characteristic data and adding

   the weighted characteristic data (Column 6 Lines 5-40 describes the

   characteristic evaluating means to determining the first signal part based on the

   multiplying weighted values); and

- Wherein the characteristic-evaluating means uses a multi-layer perceptron to

   determine the possibility that candidate part of the first signal part (Figure 1d

   shows the multi-layer neural network wherein the characteristic-evaluation is

   determined and as described in Column 5 Lines 64-67); however fails to disclose

   a characteristic extracting means for extracting characteristic data indicating the

   probability of the first signal part from the candidate part detected by the

   candidate-detecting means or from signal parts preceding and following the

   candidate part.

Nagao et al discloses an image processing system wherein detection of an image is detected

through various calculations. It is described in Column 3 Lines 63-67 through Column 4 Lines

1-55 that the characteristic data is extracted from the signal and thereby determined if the signal

is preceding or following the other signals being processed as further seen in Figure 6. The use

of characteristic extracting the information to determine the order of the signal allows for proper

order and processing of the signal. Therefore, it would have been obvious to one of ordinary

skill in the art at the time of the invention to use the signal processing system, as disclosed by

Nafeh, and further incorporate a system that uses the characteristic extracting means to indicate the probability of the various parts of the signals from other preceding or proceeding signals.

[claims 3 &32]

In regard to Claims 3 and 32, Nafeh discloses a signal processing apparatus and method wherein the detecting means includes determining means for determining, from the characteristic data, that the candidate part of the first signal part is identical to the first part which has been designated (Column 2 Lines 65+ describe that once it is determined that the candidate part of the signal is classified a control signal is sent out for further determination of other signals if it identical as well as using the features indicated in Column 3 Lines 28-30).

[claims 4 & 33]

In regard to Claims 4 and 33, Nafeh discloses a signal processing apparatus and method comprising amplitude-detecting means for detecting an amplitude of the input signal wherein the candidate-detecting means detects a pattern that the amplitude of the input signal is smaller than a predetermined value at a predetermined time interval as one of the characteristic patterns (Column 3 Lines 34-36 "Changes in power or amplitude over the frequency spectrum between program and commercial segments" and further described in Column 3 60+).

[claims 5 & 34]

In regard to Claims 5 and 34, Nafeh discloses an apparatus and method comprising a change-detecting means for detecting a change of the input signal wherein the candidate-detecting means detects a pattern that the change of the input signal is greater than a predetermined value at a predetermined time intervals as one of the characteristic patterns (Column 3 Lines 40-42 describe detecting the change in pattern of the transmission at a value within the predetermined time intervals and further described in Column 5 Lines 30-37).

[claims 6 & 35]

In regard to Claims 6 and 35, Nafeh discloses an apparatus and method comprising uniform-component detecting means for detecting a unit period in which a prescribed component of the input signals fall within a prescribed range and detects a pattern that is prescribed component of the input signal for the unit period at a predetermined time intervals is uniform as one of the characteristic patterns (Column 1 Lines 44-55 describe the patterns used for detection as well as the predetermined conditions/time that is used for the characteristic patterns).

[claims 7 & 36]

In regard to Claims 7 and 36, Nafeh discloses a method and apparatus wherein the characteristic-extracting means includes an amplitude-detecting means for detecting an amplitude of the input signal, and extracts the amplitude of the signal parts preceding and / or following the candidate as characteristic data indicating probability of the first signal part (Column 3 Lines 20+ describes the extraction of amplitude from the input signal to indicated if a commercial can be detected within the first signal part.)

[claims 8, 10, 11, 12, 22 37, 39, 40, 41 & 51]

In regard to Claims 8, 9, 10, 11, 12, 37, 38, 39, 40, and 41, Nafeh discloses a method and apparatus wherein the characteristic-extracting means includes an amplitude-detecting means for detecting an amplitude of the input signal and extracts the length of signal parts, correlation, mean, and frequency that the amplitudes of the signal parts preceding and/or following the candidate part are smaller than a predetermined threshold as characteristic data indicating probability of the first signal part (Column 3 Lines 60+ through Column 4 Lines 1-30 describes the detection of the amplitude and extraction of length and mean of the amplitude in the input signal and determination if the candidate part/commercial is within a predetermined condition which is accomplished through comparisons of the minimum, maximum, mean and the median of the amplitude.)

[claims 13 & 42]

In regard to Claims 13 and 42, Nafeh discloses a mode-detecting means for detecting a mode

of the input signal that can have a plurality of modes, and extracts the mode of the candidate

part as characteristic data indicating probability of the first signal part (Column 5 lines 30+

describe detection of modes/features and the extraction of the candidate part/commercial from

the characteristic data/input signal).

[claims 14 & 43]

In regard to Claims 14 and 43, Nafeh discloses a means for extracting existence of the first

signal part in signal that precedes or follows the candidate part as characteristic data indicating

probability of the first signal part (Figure 1A extracts the existence of the commercial while

Column 5 Lines 30+ describe the classification process).

[claims 15 & 44]

In regard to Claims 15 and 44, Nafeh discloses a spectrum-detecting means for detecting a

spectrum of the input signal, and extracts a change of the spectrum before or after the

candidate part as characteristic data indicating probability of the first signal part (Column 3 lines

20+ describes all the possibilities for detecting the spectrum of the input signal).

[claims 18 & 47]

In regard to Claims 18 and 47, Nafeh discloses a means for identifying a source of the input

signal and extracts a type of the source of the candidate part as characteristic data indicating

probability of the first signal part (Figure 1A shows the possible input sources while the pre-

processor/feature extraction 22 extracts the type of the source of the input data while

determining the probability of the signal).

[claims 19 & 48]

In regard to Claims 19 and 48, Nafeh discloses an apparatus and method that comprises a

timer for measuring time and the characteristic-extracting means extracts the time at which the

candidate part is input as characteristic part is input as characteristic data indicating probability

of the first signal part (Column 1 Lines 25+ describe the use of timers to time the candidate part

so thereby it wont be recorded onto a video recorder).

[claims 25, 26, 27, 28, 29]

In regard to Claims 25, 26, 27, 28, and 29, Nafeh discloses a signal processing apparatus

comprising:

- Recording and / or reproducing the input signal (Figure 1F record mode)

- Editing the input signal (Figure 1F shows the editing process that can occur);

- Skipping the first signal part (Figure 1F shows the skipping mode);

- Extracting only the first signal part (Figure 1 element 22 extracts the first part of

  the signal); and

- Signal consists of an audio signal and/or a video signal (Figure 1 element 12)

  and the first signal part is commercial-message part (Figure 1A element 24

  classifies if the first signal part is a commercial-message part).

Claim Rejections - 35 USC § 103

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obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a
> whole would have been obvious at the time the invention was made to a person having
> ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

Claims 16, 20, 21, 45, 49, and 50 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Nafeh (US 5,343,251) in view of Nageo et al (US 5,587,927) in further view of

Shah-Nazaroff et al (US 6,671,880).

[claims 16 & 45]

In regard to Claims 16 and 45, Nafeh in view of Nageo et al discloses a means that

extracts information but lacks the extraction of channel information of the input signal selected a

channel from a plurality of channels as characteristic data indicating probability of the first signal

part. Shah-Nazaroff teaches a system that identifies commercials as well as extract channel

information and the likelihood/probability that that the characteristics are within that signal as

seen in Figure 4. By extracting channel information it allows the system to determine

Therefore, it would be obvious to one skilled in the art at the time of the invention to

modify the apparatus/method for classifying patterns of television programs and commercials,

as disclosed by Nafeh in view of Nageo, and incorporate a system that extracts channel

information, as disclosed by Shah-Nazaroff et al, which allows for a better computation of the

probability of commercials to be detected through certain channels and how to respond to the

commercials.

[claims 20, 21, 49, & 50]

In regard to Claims 20, 21, 49, & 50, Nafeh in view of Nageo et al discloses a means

that extracts information from an input signal but lacks a genre-identifying means for identifying

a genre of the input signal, and extracts the genres of the signal parts preceding and following

the candidate part as characteristic data indicating probability of the first signal part. Shah-

Nazaroff et al discloses extraction of characteristic, such as genres, in order to determine user

characteristics which in turn allows for the probability a certain commercial within that type of

program (Column 4 Lines 12+).

Therefore, it would be obvious to one skilled in the art at the time of the invention to incorporate the extracting information from the input signal, as disclosed by Nafeh in view of Nageo et al, and incorporate a further extraction means as determining specific genres of the programs and commercials, as disclosed by Shah-Nazaroff et al, in order for classification and identifying specific genres associated with the candidate and characteristic data parts of the signal.

[claims 17 & 46]

In regard to Claims 17 and 46, Nafeh in view of Nageo discloses a means that extracts information from an input signal but lacks the extraction of an area code of the input signal that can have any one of different area codes as characteristic data indicating probability of the first signal part. Kawara et al discloses a reproducing system that programs information according to area codes that specify a certain area thereby indicating the characteristic data for that particular area as seen in Figure 4. This allows for special programming to occur in various countries due to the recognition of these countries by the area codes.

Therefore, it would be obvious to one skilled in the art at the time of the invention to incorporate the extraction of information, as disclosed by Nafeh in view of Nageo, and incorporate a system that takes an input signal that has various area codes that will identify the input signal according to the said area codes, as disclosed by Kawara et al, by incorporating this feature would allow for further identification, classification, and evaluation of the input signal

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Fax Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamie Vent whose telephone number is 571-272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).